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United States Government

Department of Energy

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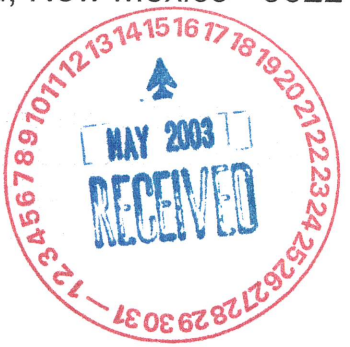
memorandum

Carlsbad Field Office
Carlsbad, New Mexico 88221



DATE: May 13, 2003

REPLY TO ATTN OF: CBFO:NTP:KWW:VW:03-2119:UFC:5822

SUBJECT: Initial Certification of Central Characterization Project at ANL-E

TO: Marvin Gunn, Jr., DOE-Chicago Operations Office Manager
Steve Warren, Washington TRU Solutions, General Manager

The Carlsbad Field Office (CBFO) has completed two certification audits of the Central Characterization Project (CCP) transuranic (TRU) waste program deployed at Argonne National Laboratory – East (ANL-E). Audit A-02-03 was conducted at ANL-E to evaluate activities related to debris September 9-13, 2002 and A-03-13 was conducted at ANL-E to evaluate activities related to homogeneous solids February 10-13, 2003. The audit teams determined that the CCP technical and quality assurance activities evaluated during both audits are in compliance with the "Waste Analysis Plan" (WAP) of the *WIPP Hazardous Waste Facility Permit* (HWFP), the *Quality Assurance Program Document (QAPD)*, the *CH Transuranic Waste Acceptance Criteria for the Waste Isolation Pilot Plant* (WIPP CH-WAC, and other CBFO requirements and standards.

Based on the results of audits A-02-03 and A-03-13, the CBFO is granting the CCP authority for certification and characterization of retrievably stored, contact-handled, debris and homogeneous waste using acceptable knowledge (AK), headspace gas (HSG) sampling and analysis, nondestructive assay (NDA) utilizing the Active/Passive Neutron Examination and Assay (APNEA) and Waste Inspection Tomography (WIT)-6 systems, real-time radiography (RTR), and visual examination (VE). The WIT NDA system is limited to determining isotopic ratios with the seventh detector for solids. Furthermore, shipments of homogeneous solids may not be made until the solids sampling program is audited and approved. See the attachments to this memorandum for the complete lists of certified processes, procedures, documents, and systems used by the CCP at the ANL-E.

TRU waste characterization or certification using significantly revised or new processes, procedures, or systems must be evaluated by the CBFO prior to their implementation.

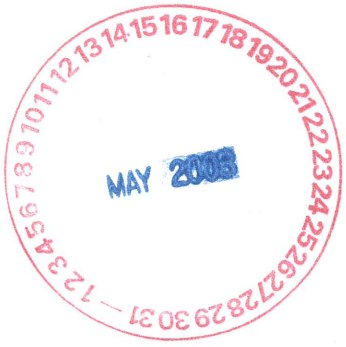
Inés Triay

Dr. Inés R. Triay
Manager

Attachments

030521

cc: w/attachments
K. Watson, CBFO
A. Holland, CBFO
D. Miehls, CBFO
C. Zvonar, CBFO
A. Harvey, DOE ANL-E
A. Gabel, DOE ANL-E
F. Sharif, WTS
T. Hedahl, WTS
S. Rose, WTS
A. Fisher, WTS
J. Stroble, WTS
W. Weyerman, WTS
B. Walker, EEG
F. Marcinowski, EPA
B. Forinash, EPA
R. Joglekar, EPA
E. Feltcorn, EPA
S. Zappe, NMED
J. Bennett, WTS
D. Standiford, WTS
M. Strum, WTS
WIPP Operating Record
L. Greene, WRES
E. Bradford, CTAC
T. Bowden, CTAC
CBFO M&RC



CENTRAL CHARACTERIZATION PROJECT AT ARGONNE NATIONAL LABORATORY - EAST CERTIFICATION PROGRAM STATUS

The CBFO Office of the National TRU Program Manager and Quality Assurance Manager have evaluated the documentation supporting the compliance of the CCP TRU waste program deployed at Argonne National Laboratory – East (ANL-E). Based on the results of audits A-02-03 and A-03-13, it is recommended that the CBFO Manger grant authority to CCP for certification and characterization of retrievably stored contact-handled debris and homogeneous solids waste using AK, HSG sampling and analysis, NDA using the APNEA and WIT-6 systems, RTR, and VE. It is recommended that the WIT nondestructive assay system be limited to determining isotopic ratios with the seventh detector for homogeneous solids. Furthermore, it is also recommended that shipments of homogeneous solids not be made until the solids sampling and analysis program is audited and approved. Attachments 2 and 3 contain the complete lists of all certified procedures and equipment utilized by the CCP for the TRU program at ANL-E. The following processes are currently approved for use by CCP at ANL-E for characterizing and certifying debris and homogeneous solids:

- AK
- HSG sampling and analysis using an automated manifold system
- NDA
  - APNEA and WIT (debris)
  - WIT for solids is limited to determining isotopic ratios using the seventh detector
- RTR
- VE
- Transportation (issued separately - CBFO:NTP:MEB:VW:02-0228:UFC:5900 dated January 28, 2002)

STATUS

- All program elements remain complete.
- The following site documents are current and demonstrate how the CCP complies with the CBFO requirements.
  - **QAPjP – CCP-PO-001, Revision 5 -** *CCP Transuranic Waste Characterization Quality Assurance Project Plan* (Approved February 5, 2003 – CBFO:NTP:KWW:03-1072:UFC-5800)
  - **WCP - CCP-PO-002, Revision 5** - *CCP Transuranic Waste Certification Plan* (Approved February 11, 2003 - CBFO:NTP:KWW:03-1218:UFC-5800)
  - **QAP -** Section 4.0 of CCP-PO-002
  - Certified Systems - see attachment 2 for the complete list of certified systems used by the CCP at the ANL-E
  - Standard operating procedures - see attachment 3 for the complete list of certified CCP procedures used at the ANL-E
- CCP participated in the following performance demonstration programs (PDPs):
  - **NDA PDP** - NDA PDP participation was satisfactory in cycle 9A for the APNEA & WIT (CBFO:NTP:MRB:VW:02-3298:UFC:5822 dated December 05, 2002

  - **HSG PDP** - Participation was satisfactory in cycle 17A for the automated manifold system (CBFO:NTP:MB:VW:03-2104 dated May 8, 2003)
- **CBFO** completed the initial certification audit A-02-03 on September 13, 2002 and completed A-03-13 February 13, 2003. The Final Audit Report was issued to NMED on March 5, 2003 with an amended report issued on April 25, 2003. The CCP TRU waste program activities for debris and solids waste at ANL-E were determined to be in compliance with CBFO requirements. Solids sampling and analysis will be verified at a later date. CCP may not ship homogeneous solids to the WIPP for disposal until the solids sampling program is audited and approved.
- **EPA** approved the QA program on January 3, 2003 and approved (Inspection Report No. EPA-ANL-E-CCP-02-03.8) the technical program at ANL-E for AK, NDA, RTR, and VE for debris waste on May 13, 2003. For solids, the EPA approved AK, RTR, VE, and NDA using the APNEA system, but limited the WIT NDA system to determining isotopic ratios using the seventh detector.
- **NMED** approved the Final Audit Report for audits A-02-03 and A-03-13 on May 8, 2003. The NMED approved the CCP audited activities for debris waste, but limited homogeneous solids activities to headspace gas sampling and analysis, radiography, and visual examination.
- All CARs associated with audits A-02-03 and A-03-13 have been successfully closed.

RECOMMENDATION

The recommendation to the CBFO Manager is to grant the CCP authority for certification and characterization of contact-handled debris homogeneous solids.

CONCURRENCE

Ms. Ava L. Holland
CBFO Quality Assurance Manager

5/13/03
Date

for Michael Ramsey

Mr. Kerry W. Watson
CBFO Assistant Manager
National TRU Program

5/13/2003
Date

CENTRAL CHARACTERIZATION PROJECT
LIST OF CERTIFIED EQUIPMENT DEPLOYED AT ANL-E

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software
Headspace Gas				
8HG1	CCP-HSG	CCP LANL – designed headspace gas sampling and analysis	Analytical system consisting of: ❑ GC/MS ❑ GC/MS interface ❑ Thermal conductivity detector ❑ (2) Analysis columns ❑ Vacuum pumps ❑ Computer work station Drum sampling/venting system consisting of: ❑ Automated sampling manifold with 29 sample bottles, valves, and tubing ❑ Sampling head assembly	❑ LabView ❑ Agilent chemstation MS system ❑ Barcode software ❑ Dickson data logger software ❑ OMEGASOFT nomad data logger software
Non-destructive Assay				
8AP1	Eberline APNEA	Eberline active passive neutron examination and assay	❑ (79) ^{3}He neutron ❑ 14MeV Zetatron Neutron Generator ❑ Shielded assay chamber ❑ Pneumatic drum conveyor system ❑ Analysis equipment	❑ APNEA acquisition software suite ❑ APNEA analysis software suite ❑ PLC code
8CT1	WITCO A&PCT	WITCO active and passive computed tomography	❑ (7) High purity Germanium detectors ❑ (6) Europium transmission sources ❑ 3-Axis drum manipulator ❑ Sharing switcher ❑ Isolation transformer ❑ Analysis equipment	❑ ACTIS ❑ ORTEC PC Fram B32 ❑ ORTEC Maestro-32

WIPP WWIS #	Site Equipment # or Title	Description	Components	Software
Non-destructive Examination				
8RR1	MCS RTR-5	Real-time Radiography Mobile Characterization System's RTR-5 [built by VJ Technologies] – 55 gallon drums	❑ Shielded x-ray enclosure with coupled hydraulically operated loading and unloading doors ❑ Drum conveyor system ❑ X-ray imaging system including X-ray tube and image intensifier ❑ Video/Audio recording equipment	

CENTRAL CHARACTERIZATION PROJECT
LIST OF CERTIFIED PROCEDURES AT ANL-E

	Procedure Number/Rev	DOCUMENT TITLE
1.		Argonne National Laboratory-East (ANL-E) Statement of Work for Characterization of ANL-E TRU Waste
2.	CCP-PO-001	*CCP Transuranic Waste Quality Assurance Project Plan*
3.	CCP-PO-002	*CCP Transuranic Waste Certification Plan*
4.	CCP-PO-007	*CCP/ANL-E Interface Document*
5.	CCP-PO-008	*CCP Quality Assurance Administrative Program*
6.	CCP-QP-001	*CCP Graded Approach*
7.	CCP-QP-002	*CCP Training and Qualification Plan*
8.	CCP-QP-004	*CCP Corrective Action Management*
9.	CCP-QP-005	*CCP TRU Nonconforming Item Reporting and Control*
10.	CCP-QP-006	*CCP Corrective Action Reporting and Control*
11.	CCP-QP-008	*CCP Records Management*
12.	CCP-QP-009	*CCP Work Control Process*
13.	CCP-QP-010	*CCP Document Preparation and Approval*
14.	CCP-QP-011	*CCP Notebooks & Logbooks*
15.	CCP-QP-013	*CCP QAPD Matrix*
16.	CCP-QP-015	*CCP Procurement*
17.	CCP-QP-016	*CCP Control of Measuring, Testing, and Data Collection Equipment*
18.	CCP-QP-017	*CCP Identification and Control of Items*
19.	CCP-QP-018	*CCP Management Assessments*
20.	CCP-QP-019	*CCP Quality Assurance Reporting to Management*
21.	CCP-QP-020	*CCP Independent Assessments*
22.	CCP-QP-021	*CCP Surveillance Program*
23.	CCP-QP-022	*CCP TRU Software Quality Assurance*
24.	CCP-QP-023	*CCP Handling, Storage, and Shipping*
25.	CCP-QP-024	*CCP Certification of CCP Audit Personnel*
26.	CCP-QP-026	*CCP Inspection Control*
27.	CCP-QP-027	*CCP Test Control*
28.	CCP-QP-028	*CCP Records Filing, Inventorying, Scheduling, and Dispositioning*
29.	CCP-QP-031	*CCP Using e-QA and the Training Database*
30.	CCP-QP-035	*CCP System Qualification Status Using the e-QA System*
31.	CCP-TP-001	*CCP Project Level Data Validation and Verification*
32.	CCP-TP-002	*CCP Reconciliation of DQOs and Reporting Characterization Data*
33.	CCP-TP-003	*CCP Sampling Design and Data Analysis for RCRA Characterization*
34.	CCP-TP-005	*CCP Acceptable Knowledge Documentation*
35.	CCP-TP-013	*CCP Waste Visual Examination and Repackaging*
36.	CCP-TP-014	*CCP Prohibited Items Removal and Repackaging*
37.	CCP-TP-015	*CCP APNEA Calibration and Calibration Verification with Surrogate Drums*
38.	CCP-TP-017	*CCP APNEA Data Analysis*
39.	CCP-TP-018	*CCP APNEA Waste Drum Assay Operations*
40.	CCP-TP-028	*CCP Radiographic Test and Training Drum Requirements*
41.	CCP-TP-030	*CCP WWIS Data Entry and TRU Waste Certification*
42.	CCP-TP-031	*CCP Headspace Gas Sampling Using Automated Manifold*
43.	CCP-TP-034	*CCP HSG Data Generation and Batch Data Report*
44.	CCP-TP-036	*CCP WIT Nondestructive Assay*
45.	CCP-TP-037	*CCP WIT Nondestructive Assay Annual Calibration*
46.	CCP-TP-038	*CCP WIT Nondestructive Assay Empirical Data Quality Measurements*
47.	CCP-TP-039	*CCP Preparing and Handling Waste Drums for Headspace Gas*
48.	CCP-TP-041	*CCP Preparing and Handling Waste Drums for Visual Examination*
49.	CCP-TP-045	*CCP RTR #5 Radiography Inspection Operation Procedure*
50.	CCP-TP-056	*CCP HSG Performance Demonstration Plan*
51.	CCP-TP-058	*CCP NDA Performance Demonstration Plan*
52.	CCP-TP-060	*CCP Container Management at Argonne National Laboratory-East*